

REMARKS

Summary Of The Office Action & Formalities

Claims 1, 3-7, 9-12, and 15-36 are all the claims pending in the application. Submitted herewith is a Petition for Extension of Time with fee.

The Examiner again overlooked the fact that Applicant is not claiming foreign priority under 35 U.S.C. § 119 and has, therefore, mistakenly reminded the Applicant to file a certified copy of JP 2000-173840.

Claims 1, 3-7, 9-12 and 15-36 continue to be rejected under 35 U.S.C. § 103(a) as being unpatentable over Minabe (USP 5,961,394).

As explained below, Applicant respectfully submits that the grounds of rejection do not create a *prima facie* case of obviousness for the pending claims. Applicant kindly requests the Examiner to carefully reconsider the distinctions between the claimed invention and the applied art and withdraw the rejection.

Detail Discussion Of Claim Rejections - 35 U.S.C. § 103

In rejecting claims 1, 3-7, 9-12 and 15-36 in view of Minabe (USP 5,961,394), the grounds of rejection reiterates the positions set forth in the prior Office Action of May 5, 2004. In an effort to partially rebut Applicant's arguments made in the last response of September 3, 2004, the Examiner appears to further rely on U.S. Patent 5,423,535 to Shaw et al.

As a preliminary matter, Applicant notes that the Examiner has attempted to introduce and rely upon a new reference (Shaw et al.). Such reliance results in a new rejection. Therefore, the Examiner is requested to withdraw the finality of the present Office Action.

Substantively, Applicant continues to believe the grounds of rejection are incorrect and that Applicant's arguments set forth in the last response of September 3, 2004 continue to be very pertinent to the present art rejection.

First, the grounds of rejection fail to meet the rigorous standard required by the Federal Circuit when trying to show that an invention would have been obvious in view of the combination of two or more references. *See, In re Lee*, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002). In particular, the grounds of rejection do not set forth the requisite showing of a motivation, taught in the prior art, to modify the club head of Minabe in view of the disclosure in Shaw et al. so as to obtain Applicant's claimed invention.

Second, the Examiner improperly applies the law governing product-by-process limitations to argue that the laser welding limitations in the claims do not provide any additional distinguishing structure.

Third, the present Office Action fails to address every point raised by the Applicant in the last response of September 3, 2004, which is in violation of the requirement set forth in the Manual of Patent Examining Procedure ("MPEP") that Examiners respond specifically to traversals ("Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it."). MPEP § 707.07(f). Moreover, without the benefit of a reply from the Examiner, it becomes extremely difficult to render appropriate advice on how best to proceed.

The foregoing points are taken up in greater detail below.

1. Lack of Motivation To Combine/Modify The Wood of Minabe In View Of Shaw et al.

In the last response, the Applicant argued that the Examiner, rather than rely on any prior art in an attempt to make up for the admitted deficiencies in the disclosure of Minabe (such as the lack of metal pieces appearing on a common face of the club), only made conclusory statements that the missing elements are obvious. Thus, the Examiner failed to establish a *prima facie* case of obvious in accordance with the basic requirements set forth in the MPEP:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. . . .

MPEP § 2143. Applicant further reminded the Examiner that the Federal Circuit holds the USPTO to a rigorous standard when trying to show that an invention would have been obvious in view of the combination of two or more references. *See, e.g., In re Lee*, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002).

Responding to Applicant's arguments, the Examiner *concedes* that Minabe "does not disclose *or suggest* metal pieces that 'appear on [the] striking face of the head and are fixed together by laser welding'" Office Action at page 6 (emphasis added). However, *without explicitly applying the reference*, the Examiner argues Shaw et al. "provides support for conventional technique of fabricating one or more face-piece components (Figs. 23-26) to optimize weight distribution, hardness, and aesthetic appearance (Col. 2, lines 13-20). *Id.*

The Examiner's new argument ignores the fact that Shaw et al. relates to an *iron* while Minabe relates to a wood or driver. This difference is not trivial. For one, as explained in

Minabe et al., a wood golf club “has a head formed by welding together shell pieces to predetermined shapes, respectively” (column 1, lines 6-8). An iron golf club has no such shell pieces that define a *hollow cavity*. Accordingly, assembling multiple pieces on a face of a wood involves very different technical constraints that are not present in an iron. For example, the face-plate thickness of iron is thickened due to its weight and shape. Also, since the force on the iron is small when the ball is hit, the face of iron is unlikely to change (*i.e.*, deform). Therefore, as Shaw et al. discloses (*see, e.g.*, col. 4; lines 23-29), it is possible to use all sorts of bonding. Unlike irons, however, the thickness of wood golf club head is relatively thin due to its weight and shape. Also, since the force on the wood is relatively large when the ball is hit, the face of wood is likely to change. This is why strong welding method is important for wood golf club head. Since the face is thin, it is difficult for an ordinary bonding. Therefore, the characteristics of wood and iron are significantly different, making it difficult, and certainly not obvious, to apply iron multi-piece technology to wood golf club head.

Moreover, the Examiner’s art rejection ignores the fact that Minabe *teaches away* from modifying the face, side, top, or bottom surface of the golf club to include multiple pieces. As explained in Applicant’s September 3 response, rather than disclosing a plurality of pieces welded on a *common surface*, let alone the striking face in particular, Minabe explicitly discloses the use of a *single* piece for each surface. *See, In re Hedges*, 228 USPQ 685, 687 (Fed. Cir. 1986) (concluding that prior art references that “teach away” from a claimed invention provide “strong evidence of unobviousness”). *See also* MPEP § 2141 (mandating that “the references must be

considered as a whole,” and, therefore, requires the Examiner to consider and confront those passages of Minabe that lead away from the claimed invention).

Indeed, as quoted above, the Examiner even conceded that Minabe does not “*suggest* metal pieces that ‘appear on [the] striking face of the head and are fixed together by laser welding’.” This concession is fundamentally at odds with the Examiner’s position that such modifications would have been obvious.

2. Improper Application Of The Law Governing Product-By-Process Limitations

Regarding the requirement that the metal pieces are fixed together by laser welding, the Examiner first disagrees that Minabe fails to disclose this feature, because “Minabe discloses laser welding of the face member 10 with the head body 12 along the periphery front edge and welding along the periphery edge is on the outside common surface of the striking face.” Office Action at page 6. This disclosure neither satisfies the limitation of laser welding a plurality of pieces on a face of a club head, nor does it suggest this limitation. In fact, the opposite is true.

The Examiner next argues that “the recitation of the limitation with respect to the laser welding process of the face members is a product by process limitation, and [a] product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even [though] the prior product was made by a different process.” Office Action at page 6, citing *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

The practice and the law governing product-by-process claims developed in response to the need to enable an applicant to claim an otherwise patentable product that resists definition by

other than the process by which it is made. For this reason product-by-process claims are limited by and defined by the process, while the determination of patentability is *based on the product itself*. The Federal Circuit held in *In re Thorpe* that the determination of patentability in "product-by-process" claims is based on the product itself, even though such claims are limited and defined by process, and thus the product in such claims is unpatentable only if it is the same as, or obvious from, a product of prior art, even if the prior product was made by a different process. Therefore, contrary to the Examiner's reading of *In re Thorpe*, product-by-process limitations must be given appropriate patentable weight, to the extend these limitations define a distinct product.

Laser welding forged or rolled material that appear on the striking face member certainly results in a distinct end product that is not taught or suggested in any of the applied art. As Applicant explained in the last response, by joining the metal pieces together using a *high energy welding*, such as *laser welding*, deterioration of the metal pieces at the welded joint is minimized or eliminated, thereby ensuring a smooth, uninterrupted outer common surface. The compound part is then suitable for post-machining, such as a plastic working. By laser welding pieces to form an outside common surface followed by plastic working, such as press-forming, these pieces provide a very flat and durable member. In comparison, if conventional welding techniques are used to weld pieces together, the resulting compound structure will not have a smooth, uninterrupted surface and would not be as durable. One skilled in the art would certainly be capable of analyzing a golf club and determine from its structure whether the club was made in accordance with Applicant's product-by-process limitations.

Furthermore, the grounds of rejection acknowledge “Minabe does not disclose[] laser welding the face member including a plurality of pieces.” Office Action at page 3. Again, Minabe would teach away from this feature. In the previous Office Action of May 5, 2004, the Examiner made of record the following position, which is evidence of this teaching away:

providing a plurality of face pieces, then laser welding the pieces together will inherently result [in] more welding seams and labor cost. These welding seams of the face member now have more stress concentration, which increases the likelihood for premature failure of the face member during its lifetime usage.

Office Action of May 5, 2004 at page 3. Therefore, even by the Examiner’s rationale, one skilled in the art would not have been motivated to include a plurality of pieces welded together on a common surface of the golf club head. Moreover, we note the Examiner’s rationale admits to the presence of distinct *structural* characteristics (albeit not disclosed in the prior art).

In short, the laser welding process results in distinct and unique structural characteristics that must be given patentable weight and that are not taught or suggested by the applied art. Moreover, the holding in *In re Thorpe* support this position and not the Examiner’s position.

3. Failure To Address All Points Raised By The Applicant

Regarding the rejection of claims 3-4 and 9-10, claims 5, 6, 11, and 12, claims 17 and 18, claim 19, claims 20, 33, and 34, claims 21 and 22, and claims 24, 27, and 30, the grounds of rejection merely restate those set forth in the last Office Action.

Applicant specifically traversed each of these rejections in the last response at pages 8-12. The present Office Action, therefore, fails to “take note of the applicant’s argument and

answer the substance of it." Therefore, the Examiner is kindly requested to set forth in a new office action the Examiner's basis for rejecting these claims in view of Applicant's last arguments or withdraw the rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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